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## EXPLANATION OF DATA

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The information presented here was compiled on deaths in which the King County Medical Examiner assumed jurisdiction during the calendar year 2006. (*Please refer to Pages 2 and 3 which outline this jurisdictional definition.*) This report emphasizes the role of alcohol, drugs, and firearm use in violent deaths. Health agencies, safety councils, and lawmakers may find these statistics useful. If the quality of life in King County is to be improved then perhaps this report can serve as a basis for change.

The Medical Examiner serves the geographic area that includes all 2,130 square miles of King County, bounded by Pierce County to the south, Snohomish County to the north, Kittitas and Chelan Counties to the east, and Puget Sound to the west. In 2006 the King County population was estimated to be 1,835,300<sup>1</sup>. Included within King County are 42 cities and towns including Seattle, the state's largest city. Mercer Island, Vashon Island, two major airports and several colleges and universities are all in the geographic area served by the Medical Examiner's Office. In King County more than 20 hospitals and a major trauma center serve the entire Pacific Northwest region.

This report summarizes demographics from individual cases in which the Medical Examiner assumed jurisdiction, and presents them in aggregate form. The location (Nearest Incorporated City to the Fatal Incident, Table 1-8, page 17) represents the location of the incident to the nearest city, not the residential address of the individual. Each manner (category) of death is subdivided into the various sub-groupings (methods) appropriate to that manner, which together form a more detailed description of the cause and manner of death.

The variables displayed in the tables such as race, sex, age, etc., have been selected as those most likely to assist and interest individuals using these data in assembling a profile of death statistics on deaths examined by the Medical Examiner's Office for 2006. According to 2004 Office of Financial Management (OFM) estimates, the racial distribution of King County is 77.7% White, 5.8% Black, 3.3% two or more races indicated (new category in the year 2000), 12.2% Asian (including Hawaiian and other Pacific Islanders), and 1.0% Native American. Information on Hispanic ethnicity of the decedent is not available for every case, and will not be presented in this report.

Medical Examiner figures cannot be directly compared to the racial distribution of King County residents. The main reason for this is that, as emphasized in Table 1-9 on page 19, in 17% of the Medical Examiner cases the incident leading to death occurred outside of King County and the decedent likely was not a resident of King County. However, as a rough estimate, the only manner of death that varies from the racial distribution of the county by a large percentage is Homicide (see discussion on page 43).

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<sup>1</sup> State of Washington, Office of Financial Management, June 27, 2007 estimate.

Age groups are divided into youth and adult. The youth groups are infants (newborn to 11 months), toddlers (1-5 years), grade school (6-12 years), junior high (13-15 years), and high school (16-19 years). Adult age groups are in corresponding decades with the last being 90 years old or older.

Blood alcohol (ethanol) data included here represent the blood level at the time of death. Alcohol is metabolized at a rate of 0.015 to 0.018 grams percent per hour. Thus, if there is a significant survival interval, the blood alcohol at the time of death will be lower than at the time of incident. Consequently, blood alcohol tests are not performed in cases where death occurs more than 24 hours after the fatal injury. For these reasons, an unknown number of cases not tested or showing no blood alcohol may actually have had a measurable alcohol concentration at the time of the incident.

Three sections are included that review specific issues. Data are presented which highlights deaths due to drugs, firearms, and among children and youth. The firearm data pertain to the victim because data relating to the shooter are not included in the Medical Examiner's investigation. On deaths among children and youth, the analysis focuses on violent, non-natural causes of death.

Data on natural deaths are included. However, these deaths due to natural causes are not representative of all natural deaths in King County. Natural deaths that the Medical Examiner investigates are those that occur suddenly and unexpectedly with no physician in attendance, or under suspicious circumstances. Such natural deaths comprised 37% (752/2,055) of all deaths that the Medical Examiner investigated in 2006.

The "Undetermined" category includes deaths in which the manner could not be clearly determined. In some cases, serious doubt existed as to whether the injury occurred with intent or as a result of an accident. In others, lack of witnesses or prolonged time between death and discovery precluded the accurate determination of the circumstances surrounding death. Moreover, it may be difficult to assess street drug or medication overdose deaths as showing enough features to reasonably determine the manner of death. Also included in the "Undetermined" category are Fetal Deaths, which, according to the State of Washington death certification guidelines, are not assigned a manner of death.

Those interested in obtaining more specific information and data from the King County Medical Examiner's Office should contact (206) 731-3232, extension 1.

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## *MEDICAL EXAMINER CASES IN 2006*

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The following provides a summary of the raw data from the Medical Examiner's cases for the year 2006.

In 2006 there were an estimated 12,966 deaths in King County<sup>2</sup> (0.71% of a 2007 population estimate of 1,835,300). Of these deaths, 8,791 (68%) were reported to the Medical Examiner's Office by medical and law enforcement personnel. Based on analysis of the scene and circumstances of death and the decedent's medical history gathered by the medicolegal investigators, the Medical Examiner's Office assumed jurisdiction in 2,119 of these reported deaths, of which 64 were either ultimately found to be non-human remains or were anthropology or contract cases. Throughout the discussion of data that follows, except where stated, the non-human, anthropology, and contract cases are excluded. The number of applicable cases used in this report is 2,055 deaths.

Of note is the fact that the Medical Examiner declined jurisdiction in 6,672 of the deaths that were reported. The Medical Examiner's Office applies a strict interpretation of the legislative language in terms of "persons who die suddenly when in apparent good health and without medical attendance within thirty-six hours preceding death" (RCW 68.50). The Medical Examiner assumes jurisdiction only if both conditions (lack of medical care and apparent good health) apply, and there is no attending outside physician with sufficient knowledge of the individual's natural disease condition to certify the death.

The Medical Examiner's Office performed autopsies in 67% (1,385/2,055) of the cases in which jurisdiction was assumed. Autopsies by a Medical Examiner pathologist were not performed in deaths where scene, circumstances, medical history, and external examination of the body provided sufficient information for death certification. In 2006 there were 411 such deaths, accounting for 20% (411/2,055) of the total deaths. In addition, there were 255 deaths (12%) (255/2,055) certified by attending private physicians after review by and consultation with the Medical Examiner.

Several factors appear repeatedly in the unnatural deaths. Of all traffic fatalities in which tests were performed, 37% (63/171) tested positive for presence of alcohol (ethanol) in the blood. In recognition of the importance of safety devices in traffic accidents, Medical Examiner data indicate that of the 141 vehicle occupants who died, 55% (77/141) were wearing restraints.

In the 28 deaths involving motorcyclists, all 28 (100%) were wearing helmets.

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<sup>2</sup> Death certificates filed in King County, (Vital Statistics, Public Health - Seattle & King County, 2007).

Firearms were the most frequent instrument of death in homicides and suicides, accounting for 57% (52/91) of the homicides and 43% (98/227) of the suicides.

While the discussion here tends to depict the more violent types of death, the reader should be reminded that 37% (752/2,055) of Medical Examiner cases involve natural deaths. Specific discussion and presentation of relevant tables regarding 2006 cases follow this brief summary.

**Table 1-1 Deaths Occurring in King County / Medical Examiner Cases / 2006**

CASES BY MANNER OF DEATH <sup>3</sup>			NUMBER OF KCME DEATHS	PERCENT OF KCME DEATHS
Accident Other	(A)		721	35.1%
Accident Traffic	(T)		211	10.3%
Homicide	(H)		91	4.4%
Natural	(N)		752	36.6%
Suicide	(S)		227	11.0%
Undetermined <sup>4</sup>	(U)		53	2.6%
Total KCME general cases			2,055	100%
Non-applicable cases where jurisdiction was assumed <sup>5</sup>			64	
Total KCME jurisdiction cases			2,119	
Total KCME general cases <sup>6</sup>			2,055	
Deaths reported to KCME but no jurisdiction was assumed (NJA)			6,672	
All other deaths in King County not reported to KCME			4,239	
ALL KING COUNTY DEATHS <sup>7</sup>			12,966	

<sup>3</sup>The letters following each manner of death will be used in most tables throughout this report (A = Accident (Non-Traffic), T = Traffic, H = Homicide, N = Natural, S = Suicide, U = Undetermined).

<sup>4</sup>Includes nine fetal deaths, which, according to Washington State death certification procedures, are not assigned a manner, and two cases pending investigation.

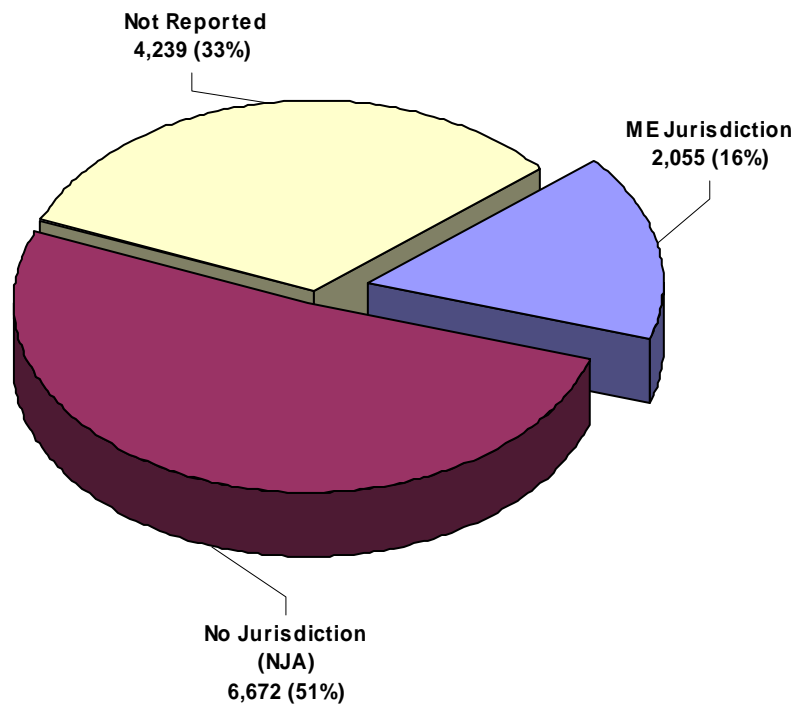
<sup>5</sup>Non-applicable includes 48 non-human bones/tissue, and 16 anthropology/contract cases.

<sup>6</sup>This is the total number of cases that will be referred to throughout this report unless otherwise noted.

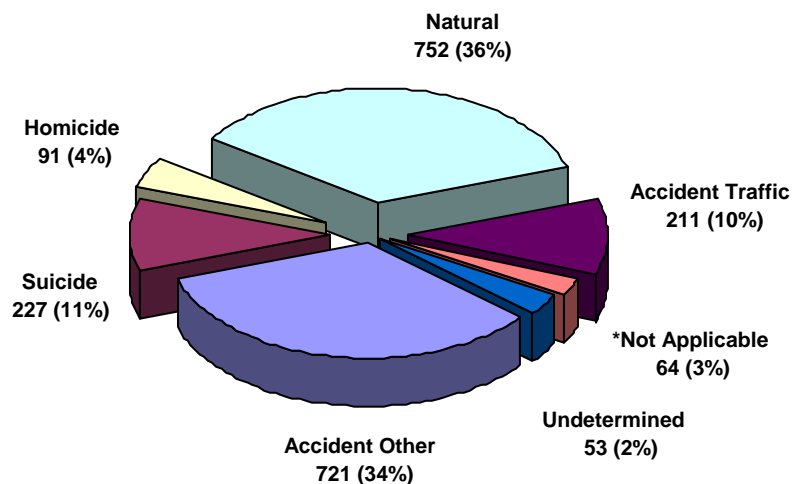
<sup>7</sup>Death certificates filed in King County (Vital Statistics, Public Health – Seattle & King County, 2007)

**Graph 1-1 All King County Deaths with Medical Examiner Jurisdiction Shown / 2006**

There were 12,966 deaths in King County in 2006.

**Graph 1-2 Manner of Death for All Medical Examiner Jurisdiction Cases / 2006**

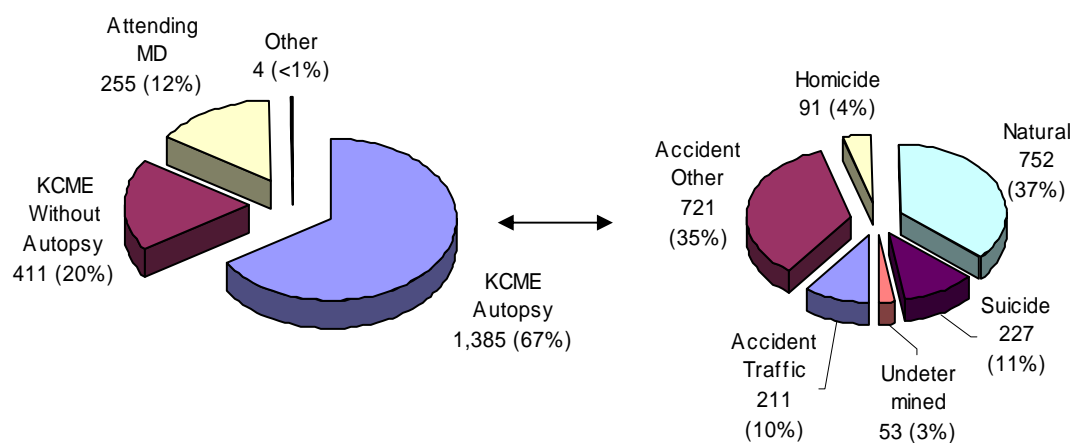
Jurisdiction assumed in 2,119 cases<sup>8</sup>.



<sup>8</sup>This number includes 64 non-applicable cases (non-human tissue/bones and anthropology/contract cases).

**Table 1-2 Method of Certification / Manner of Death / KCME / 2006**

CERTIFICATION	MANNER OF DEATH						TOTAL	%
	A	T	H	N	S	U		
KCME Autopsies	460	151	88	448	191	47	1385	67.4%
KCME External Exams	153	59	0	160	36	3	411	20.0%
KCME Other	0	0	3 <sup>9</sup>	1	0	0	4	0.2%
Attending Physician	108	1	0	143	0	3	255	12.4%
<b>Totals</b>	<b>721</b>	<b>211</b>	<b>91</b>	<b>752</b>	<b>227</b>	<b>53</b>	<b>2,055</b>	<b>100%</b>

**Graph 1-3 Method of Certification for all King County Medical Examiner Jurisdiction Cases / 2006**

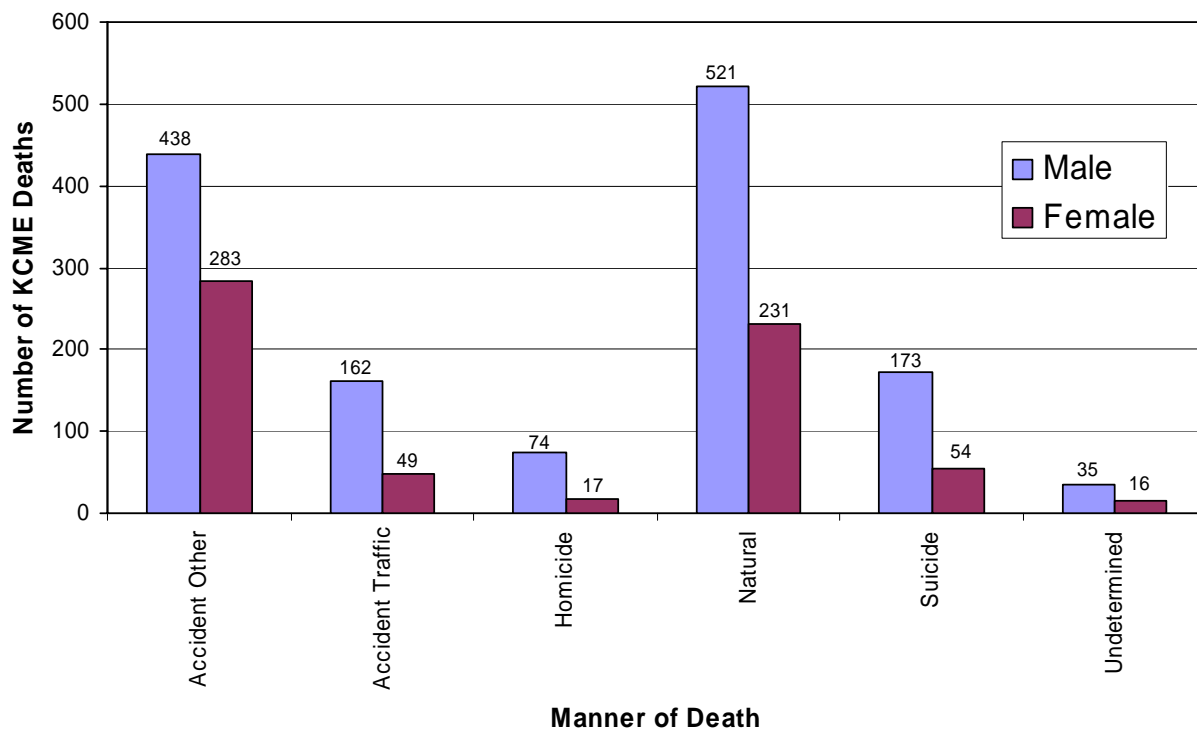
<sup>9</sup> The remains of three (3) victims whose deaths were classified as Homicide were returned to the county(s) where the original injuries occurred. Because Harborview Medical Center is a regional trauma center, the King County Medical Examiner's Office often receives victims of violence from surrounding counties. By prior agreement, the remains of some of these victims are returned to the originating county for autopsy by the Medical Examiner of record.

### Manner of Death in 2006 King County Medical Examiner General Cases

**Table 1-3 Sex / Manner of Death / King County Medical Examiner / 2006**

SEX	MANNER OF DEATH						TOTAL	%
	A	T	H	N	S	U		
Male	438	162	74	521	173	35	1403	68%
Female	283	49	17	231	54	16	650	32%
<b>Totals</b>	<b>721</b>	<b>211</b>	<b>91</b>	<b>752</b>	<b>227</b>	<b>53<sup>10</sup></b>	<b>2,055<sup>11</sup></b>	<b>100%</b>

**Graph 1-4 Sex / Manner of Death / King County Medical Examiner / 2006<sup>12</sup>**



<sup>10</sup>Includes two fetal deaths of undetermined sex.

<sup>11</sup>Includes two fetal deaths of undetermined sex.

<sup>12</sup>Does not include two fetal deaths of undetermined sex.



**Table 1-4 Age / Sex / Manner of Death / King County Medical Examiner / 2006**

AGE / SEX	MANNER OF DEATH						Sub-Total	TOTAL	%
	A	T	H	N	S	U			
Under 1 year	2	1	4	25	0	9		41	2.0%
<i>Male</i>	1	0	3	18	0	5	27		
<i>Female</i>	1	1	1	7	0	2	12		
<i>Unknown</i>	0	0	0	0	0	2	2		
1 - 5 years	11	1	2	8	0	0		22	1.1%
<i>Male</i>	6	1	2	4	0	0	13		
<i>Female</i>	5	0	0	4	0	0	9		
6- 12 years	3	2	0	1	0	0		6	0.2%
<i>Male</i>	3	1	0	1	0	0	5		
<i>Female</i>	0	1	0	0	0	0	1		
13-15 years	5	4	2	0	1	1		13	0.7%
<i>Male</i>	4	3	0	0	0	1	8		
<i>Female</i>	1	1	2	0	1	0	5		
16-19 years	10	23	7	5	10	0		55	2.6%
<i>Male</i>	9	17	7	3	9	0	44		
<i>Female</i>	1	6	0	2	1	0	10		
20- 29 years	57	46	29	12	40	3		187	9.1%
<i>Male</i>	46	39	26	10	33	3	158		
<i>Female</i>	11	7	3	2	7	0	30		
30- 39 years	63	27	14	50	39	5		198	9.6%
<i>Male</i>	41	19	13	35	29	2	139		
<i>Female</i>	22	8	1	15	10	3	59		
40- 49 years	104	36	19	107	45	16		327	15.9%
<i>Male</i>	68	28	15	84	33	13	241		
<i>Female</i>	36	8	4	23	12	3	86		
50- 59 years	140	25	9	186	47	10		417	20.3%
<i>Male</i>	100	20	7	145	34	5	311		
<i>Female</i>	40	5	2	41	13	5	106		
60 - 69 years	57	16	2	152	18	5		250	12.2%
<i>Male</i>	43	14	1	118	16	3	195		
<i>Female</i>	14	2	1	34	2	2	55		
70 - 79 years	68	9	0	89	12	2		180	8.8%
<i>Male</i>	40	5	0	48	9	2	104		
<i>Female</i>	28	4	0	41	3	0	76		
80 - 89 years	142	17	2	76	12	0		249	12.1%
<i>Male</i>	62	12	0	40	8	0	122		
<i>Female</i>	80	5	2	36	4	0	127		
90+ years	59	4	1	41	3	1		109	5.3%
<i>Male</i>	15	3	0	16	2	1	37		
<i>Female</i>	44	1	1	25	1	0	72		
Unknown	0	0	0	0	0	1		1	0.1%
<i>Male</i>	0	0	0	0	0	0	0		
<i>Female</i>	0	0	0	0	0	1	1		
<b>Totals</b>	<b>721</b>	<b>211</b>	<b>91</b>	<b>752</b>	<b>227</b>	<b>53</b>		<b>2,055</b>	<b>100%</b>

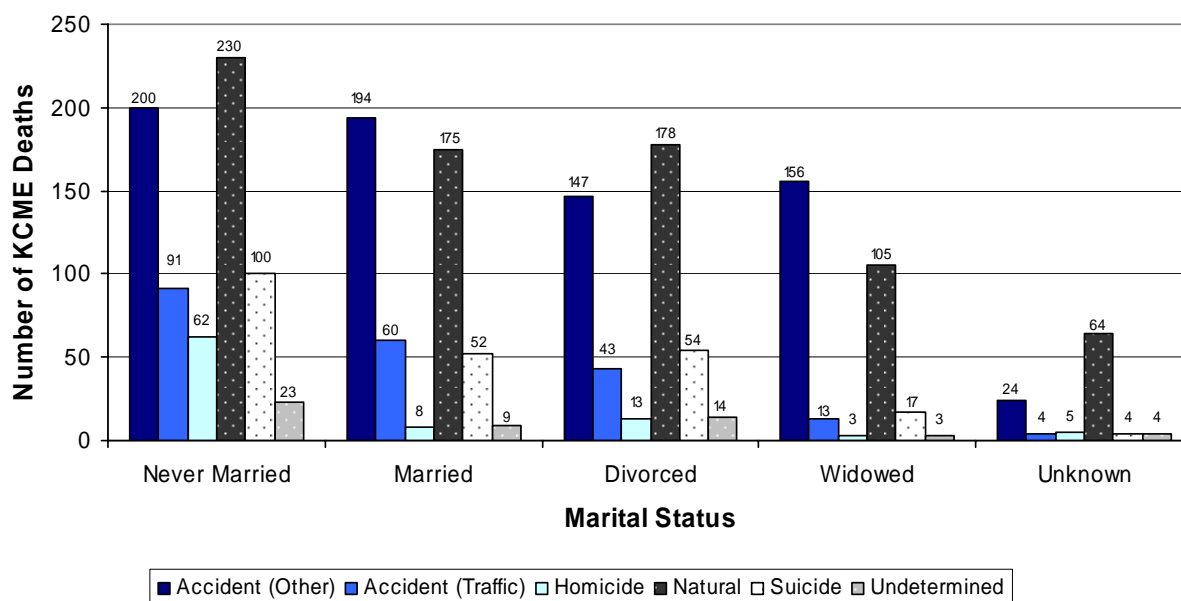
**Table 1-5 Race / Sex / Manner of Death / King County Medical Examiner / 2006<sup>13</sup>**

RACE / SEX	MANNER OF DEATH						Sub-Total	TOTAL	%
	A	T	H	N	S	U			
White								1662	80.9%
<i>Male</i>	359	125	38	416	148	28	1114		
<i>Female</i>	249	39	12	186	49	12	547		
<i>Unknown</i>	0	0	0	0	0	1	1		
Black								204	9.9%
<i>Male</i>	51	13	18	65	9	5	161		
<i>Female</i>	15	3	4	18	2	1	43		
Asian								120	5.8%
<i>Male</i>	16	17	13	23	13	1	83		
<i>Female</i>	14	5	1	14	3	0	37		
Native American								43	2.1%
<i>Male</i>	10	7	4	7	2	1	31		
<i>Female</i>	5	1	0	5	0	1	12		
Other								25	1.2%
<i>Male</i>	2	0	1	10	1	0	14		
<i>Female</i>	0	1	0	8	0	2	11		
Unknown								1	0.1%
<i>Male</i>	0	0	0	0	0	0	0		
<i>Female</i>	0	0	0	0	0	0	0		
<i>Unknown</i>	0	0	0	0	0	1	1		
<b>Totals</b>	<b>721</b>	<b>211</b>	<b>91</b>	<b>752</b>	<b>227</b>	<b>53</b>		<b>2,055</b>	<b>100%</b>

<sup>13</sup>A = Accident (Non-Traffic), T = Traffic, H = Homicide, N = Natural, S = Suicide, U = Undetermined.

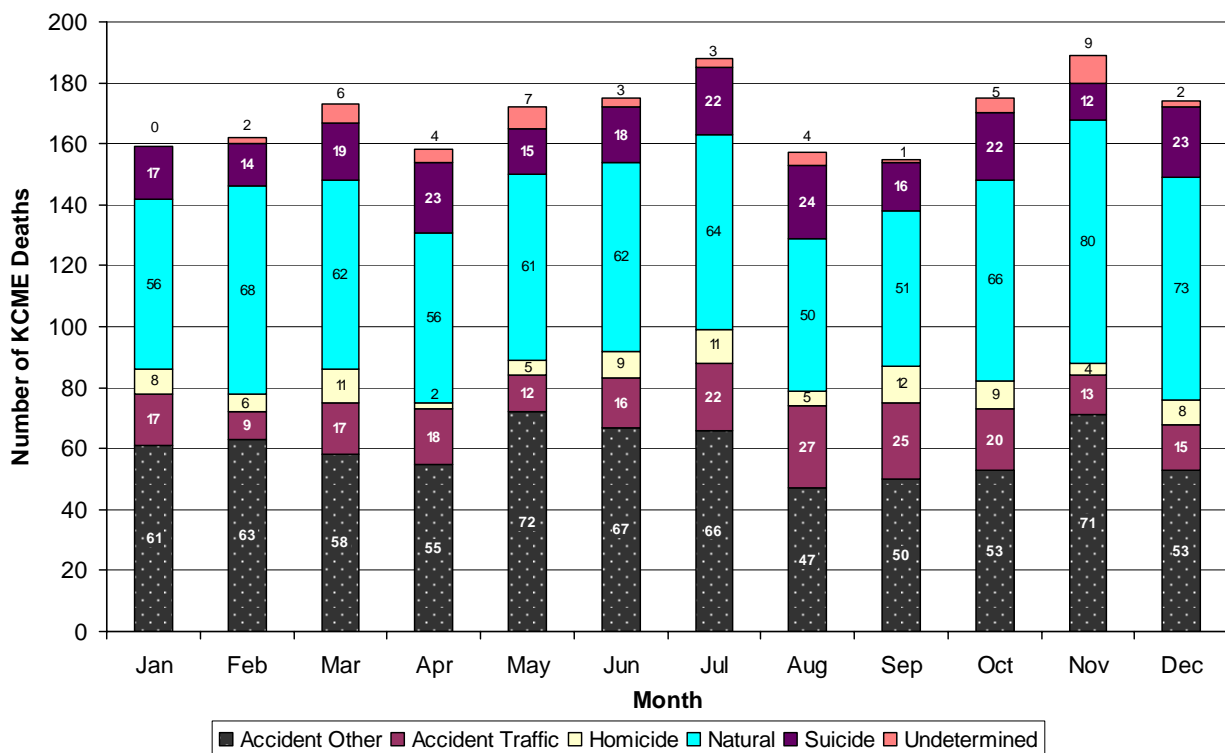
**Table 1-6 Marital Status / Sex / Manner of Death / King County Medical Examiner / 2006<sup>14</sup>**

MARITAL STATUS / SEX	MANNER OF DEATH						Sub-Total	TOTAL	%
	A	T	H	N	S	U			
Never Married	200	91	62	230	100	23		706	34%
Male	148	71	55	182	85	16	557		
Female	52	20	7	48	15	5	147		
Unknown	0	0	0	0	0	2	2		
Married	194	60	8	175	52	9		498	24%
Male	132	46	6	130	41	8	363		
Female	62	14	2	45	11	1	135		
Divorced	147	43	13	178	54	14		449	21%
Male	94	35	8	124	33	8	302		
Female	53	8	5	54	21	6	147		
Widowed	156	13	3	105	17	3		297	14%
Male	44	7	0	38	12	1	102		
Female	112	6	3	67	5	2	195		
Unknown	24	4	5	64	4	4		105	5%
Male	21	3	5	47	2	2	80		
Female	3	1	0	17	2	2	25		
<b>Totals</b>	<b>721</b>	<b>211</b>	<b>91</b>	<b>752</b>	<b>227</b>	<b>53</b>		<b>2,055</b>	<b>100%</b>

**Graph 1-5 Marital Status / Manner of Death / King County Medical Examiner / 2006**<sup>14</sup>A = Accident (Non-Traffic), T = Traffic, H = Homicide, N = Natural, S = Suicide, U = Undetermined.

**Table 1-7 Month / Manner of Death / King County Medical Examiner / 2006<sup>15</sup>**

MONTH	MANNER OF DEATH						Total	%
	A	T	H	N	S	U		
Prior to 2005	0	0	1	0	0	4	5	0.2%
2005	5	0	0	3	2	3	13	0.6%
January	61	17	8	56	17	0	159	7.8%
February	63	9	6	68	14	2	162	7.9%
March	58	17	11	62	19	6	173	8.4%
April	55	18	2	56	23	4	158	7.7%
May	72	12	5	61	15	7	172	8.4%
June	67	16	9	62	18	3	175	8.5%
July	66	22	11	64	22	3	188	9.2%
August	47	27	5	50	24	4	157	7.6%
September	50	25	12	51	16	1	155	7.5%
October	53	20	9	66	22	5	175	8.5%
November	71	13	4	80	12	9	189	9.2%
December	53	15	8	73	23	2	174	8.5%
<b>Totals</b>	<b>721</b>	<b>211</b>	<b>91</b>	<b>752</b>	<b>227</b>	<b>52</b>	<b>2,055</b>	<b>100%</b>

**Graph 1-6 Month / Manner of Death / King County Medical Examiner / 2006**<sup>15</sup>A = Accident (Non-Traffic), T = Traffic, H = Homicide, N = Natural, S = Suicide, U = Undetermined.

**Table 1-8**                      **Nearest Incorporated City to the Fatal Incident / KCME / 2006<sup>16</sup>**

CITY	MANNER OF DEATH					TOTAL	%
	A	T	H	S	U		
Algona	0	0	0	0	0	0	0%
Auburn	33	17	0	12	1	63	4.8%
Beaux Arts	0	0	0	0	0	0	0%
Bellevue	31	9	4	12	1	57	4.4%
Black Diamond	1	2	0	1	0	4	0.3%
Bothell	16	2	0	2	0	20	1.5%
Burien	13	0	3	3	2	21	1.6%
Carnation	1	1	0	1	0	3	0.2%
Clyde Hill	0	0	0	0	0	0	0%
Covington	1	2	0	1	0	4	0.3%
Des Moines	6	0	0	5	0	11	0.8%
Duvall	0	3	0	1	0	4	0.3%
Enumclaw	11	2	0	2	1	16	1.2%
Fall City	1	0	0	0	0	1	0.1%
Federal Way	17	2	3	12	1	35	2.7%
Hunt's Point	0	0	0	0	0	0	0%
Issaquah	8	3	0	7	0	18	1.4%
Kenmore	6	0	0	1	0	7	0.5%
Kent	30	9	4	14	3	60	4.6%
Kirkland	22	0	6	7	1	36	2.8%
Lake Forest Park	1	0	0	0	0	1	0.1%
Maple Valley	8	1	1	3	1	14	1.1%
Medina	1	0	0	0	0	1	0.1%
Mercer Island	4	0	0	1	0	5	0.4%
Milton	0	0	0	0	0	0	0%
Newcastle	0	0	0	1	0	1	0.1%
Normandy Park	0	0	0	0	0	0	0%
North Bend	4	4	0	3	1	12	0.9%
Pacific	2	0	0	1	0	3	0.2%
Ravensdale	1	2	1	2	0	6	0.5%

<sup>16</sup>Table does not include cases where manner of death is classified "Natural." A = Accident (Non-Traffic), T = Traffic, H = Homicide, S = Suicide, U = Undetermined.

**Table 1-8      Nearest Incorporated City to the Fatal Incident / KCME / 2006<sup>17</sup> (continued)**

CITY	MANNER OF DEATH					Total	%
	A	T	H	S	U		
Redmond	6	3	0	3	0	12	0.9%
Renton	31	8	5	15	3	62	4.8%
Sammamish	4	0	0	0	0	4	0.3%
SeaTac	4	3	3	2	0	12	0.9%
Seattle	322	59	33	89	29	532	40.8%
Shoreline	9	4	2	4	0	19	1.5%
Skykomish	1	3	0	0	0	4	0.3%
Snoqualmie	1	2	0	3	0	6	0.5%
Tukwila	3	3	1	2	2	11	0.8%
Vashon Island	4	0	0	2	0	6	0.5%
Woodinville	2	0	0	0	0	2	0.2%
Yarrow Point	2	0	0	0	0	2	0.2%
Unincorporated King County	0	0	11	0	0	11	0.8%
Outside of King County	114	66	14	15	5	214	16.4%
Unknown Location	0	1	0	0	2	3	0.2%
<b>Totals</b>	<b>721</b>	<b>211</b>	<b>91</b>	<b>227</b>	<b>53</b>	<b>1,303</b>	<b>100%</b>

<sup>17</sup>A = Accident (Non-Traffic), T = Traffic, H = Homicide, S = Suicide, U = Undetermined.

## OUT OF COUNTY CASES IN 2006

Within King County are several major hospitals and a major trauma center that serve the entire Pacific Northwest and the western United States. Consequently, there are numerous deaths each year where the incident leading to death occurred outside of King County. However, because the death occurred within King County, it comes under the jurisdiction of the King County Medical Examiner. In 2006 there were 217 deaths (17%, 217/1,303) where the incident (excluding deaths classified as “Natural”) occurred out of county. Table 1-9 displays these deaths by incident location and manner.

**Table 1-9 Fatal Incident Occurred Outside of King County / KCME / 2006<sup>18</sup>**

INCIDENT LOCATION	MANNER OF DEATH					TOTAL
	A	T	H	S	U	
Alaska	5	0	0	0	0	5
Idaho	1	0	0	1	0	2
Montana	2	1	0	0	0	3
Oregon	3	0	0	0	0	3
Other States	2	0	1	0	0	3
Washington						
Kitsap County	18	6	1	2	0	27
Pierce County	12	2	2	0	1	17
Skagit County	3	5	1	1	0	10
Snohomish County	24	18	3	4	0	49
Thurston County	2	3	0	2	1	8
Other WA Counties	42	27	6	5	3	83
Washington Sub-Total	<b>101</b>	<b>61</b>	<b>13</b>	<b>14</b>	<b>5</b>	<b>194</b>
Out of Country	0	4	0	0	0	4
Unknown	0	1	0	0	2	3
<b>Totals</b>	<b>114</b>	<b>67</b>	<b>14</b>	<b>15</b>	<b>7</b>	<b>217</b>

<sup>18</sup>Table does not include cases where manner of death is classified as “Natural.” A = Accident (Non-Traffic), T = Traffic, H = Homicide, S = Suicide, U = Undetermined.

